

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Advanced Television Systems)	MB Docket 87-268
And Their Impact upon the Existing)	
Television Broadcast Service)	

TO: Office of the Secretary
ATTN: The Commission

COMMENTS OF WASHBURN UNIVERSITY OF TOPEKA

Washburn University of Topeka (Washburn), licensee of noncommercial educational television Station KTWU-DT, Topeka, Kansas, through its attorneys and pursuant to Section 1.415 of the rules, hereby files its Comments in response to the Commission's *Seventh Further Notice of Proposed Rule Making* (Notice) in the above-referenced proceeding proposing a new DTV Table of Allotments.

1. The Commission seeks comment on "whether the channel assignments in the proposed DTV Table will serve the Commission's goals of promoting overall spectrum efficiency and ensuring the best possible DTV service to the public." *Notice* at page 7, para. 16. Station KTWU(TV) provides the only in-state public television service for its coverage area. As explained in the attached engineering statement, the proposed allotment for post-transition Station KTWU-DT on Channel *11 would result in a very substantial and needless reduction in service. It would also create an area in which no in-state over-the-air public television service would be available, and perhaps no over-the-air public television service at all, in derogation of the Commission's goals.

2. Analog and transitional digital facilities. Station KTWUTV) is licensed to operate in analog mode on Channel *11 with 316 kW ERP at 302 meters HAAT. As licensed in File No. BLEDT-20030610AAO, Station KTWU-DT is operating during the transition on Channel *23 with a directional antenna at ERP of 960 kW and at 281 meters HAAT. The current operation was designed to provide substantial transitional public service before reverting to permanent digital operations on Channel *11. The licensee's plan has always been to use the current, almost new, analog top-mounted nondirectional Channel *11 antenna for that post-transition service.

3. The proposed DTV Table facilities would result in marked diminution of service. The proposed DTV Table provides for Station KTWU-DT to operate after the transition on its current analog Channel *11, as the licensee had selected on Form 382. However, the licensee erroneously checked maximization and specified its transitional DTV license in its pre-election certification rather than checking replication. That is an error that can be readily corrected at this time to tremendous public advantage and with no adverse effect. The facilities specified in the proposed DTV table, with ERP of 26 kW at 281 meters HAAT and a highly directional antenna, would, as demonstrated in the engineering exhibit, result in a marked reduction in station coverage. The engineering statement shows that if Station KTWU-DT were to broadcast with the proposed facilities, the population served would drop very substantially, by 173,000 people, or 14.2%

4. The DTV Table facilities would result in needless crippling expense and deprivation of public service. The facilities shown in the draft DTV Table would result in a substantial reduction in public service and a financial crisis for Washburn. A new highly directional antenna to meet the proposed allotment would entail unbudgeted funding of approximately \$150,000. Moreover, such operation would leave a substantial area without any in-state, over-the-air public television DTV service. It appears that it would also leave some established KTWU viewers to the west with no public television signal at all. However, an interference study shows that Station KTWU-DT could operate omni-directionally on Channel *11 with ERP of 21.5 kW at 302 meters HAAT without causing prohibited predicted interference to any other digital facility operating as proposed in the DTV Table, except for trivial predicted interference to one station. The exception is predicted 0.1% new interference to the signal of post-transition Station KGIN-DT, Grand Island, Nebraska. Attached hereto is a copy of an agreement between the licensees of the two stations mutually consenting to that interference in view of the fact that the predicted interference area is remote and sparsely, if at all, populated.

5. Requested relief. With this information, the proposed DTV Table should be revised for Station KTWU-DT to authorize ERP of 21.5 kW for omni-directional operation at an HAAT of 302 meters. The proposed revision will avoid a needless loss of service for a substantial population, permit the use of an antenna already in place and avoid the need to purchase a new, expensive antenna, and advance the Commission's goals in this proceeding.

WHEREFORE, for the foregoing reasons, Washburn respectfully requests that the proposed DTV Table be amended as proposed herein.

Respectfully submitted,

WASHBURN UNIVERSITY OF TOPEKA



By: _____

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Washington, D.C. 20036-7322

Its Attorneys

January 25 2007

ENGINEERING STATEMENT
ON BEHALF OF
WASHBURN UNIVERSITY OF TOPEKA
LICENSEE OF
KTWU-DT, TOPEKA, KANSAS
DTV CH. 11 21.5 KW ND ERP 302 METERS HAAT
IN RESPONSE TO
SEVENTH FURTHER NOTICE OF PROPOSED RULE MAKING
MB DOCKET NO. 87-268
JANUARY 2007

COHEN, DIPPELL AND EVERIST, P.C.
CONSULTING ENGINEERS
RADIO AND TELEVISION
WASHINGTON, D.C.

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

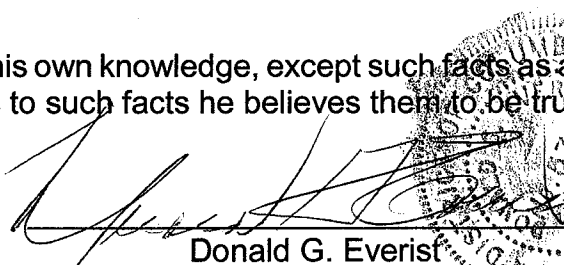
Donald G. Everist, being duly sworn upon his oath, deposes and states that:

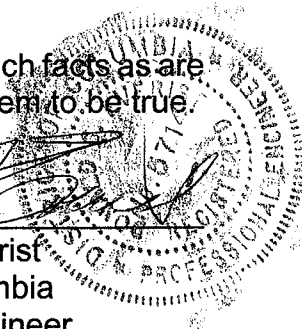
He is a graduate electrical engineer, a Registered Professional Engineer in the District of Columbia, and is President, Secretary and Treasurer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

That his qualifications are a matter of record in the Federal Communications Commission;

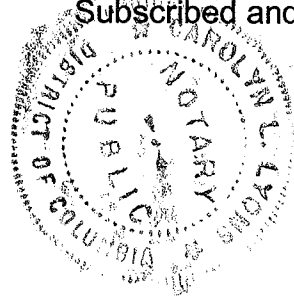
That the attached engineering report was prepared by him or under his supervision and direction and

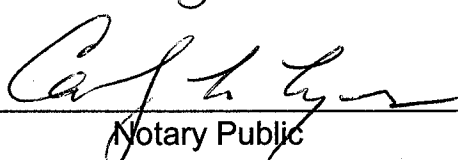
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true


Donald G. Everist
District of Columbia
Professional Engineer
Registration No. 5714



Subscribed and sworn to before me this 24th day of January, 2007.





Notary Public

My Commission Expires: 2/28/2008

COHEN, DIPPELL AND EVERIST, P. C.

City of Washington)
) ss
District of Columbia)

Ryan Felmlee, being duly sworn upon his oath, deposes and states that:

He is a graduate electrical engineer of the Pennsylvania State University, has successfully completed the Engineer-In-Training examination ("EIT") in the State of Virginia, and is a staff engineer of Cohen, Dippell and Everist, P.C., Consulting Engineers, Radio - Television, with offices at 1300 L Street, N.W., Suite 1100, Washington, D.C. 20005;

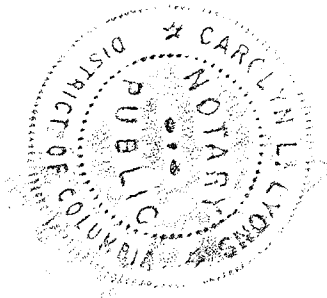
That the attached engineering report was prepared by him or under his supervision and direction and

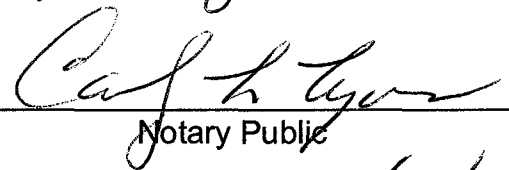
That the facts stated herein are true of his own knowledge, except such facts as are stated to be on information and belief, and as to such facts he believes them to be true.



Ryan Felmlee
District of Columbia

Subscribed and sworn to before me this 24th day of January, 2007.





Notary Public

My Commission Expires: 2/28/2008

This engineering statement has been prepared on behalf of Washburn University of Topeka, licensee of KTWU(TV), Topeka, Kansas. The purpose of this engineering statement is to accompany a filing in response to the Seventh Further Notice of Proposed Rule Making, MB Docket No. 87-268 (“SFNPRM”)¹ Appendix B of the SFNPRM the FCC’s proposed table of allotments for DTV post-transition operation.

On FCC Form 381, KTWU elected to operate its post-transition DTV station at maximized facilities, as authorized by license (FCC File No. BLEDT-20030610AAO). However, KTWU will also be operating its post-transition DTV facilities on channel 11, as opposed to the currently licensed DTV channel 23. When returning to channel 11 and upon cessation of analog broadcasting, KTWU plans to utilize the existing top-mounted non-directional antenna for final DTV operation. However, the KTWU elected post-transition facilities are highly directional and therefore not appropriate for the existing non-directional top-mounted antenna. Therefore, KTWU hereby requests that its FCC Form 381 election choice be changed to replication of its analog facilities.

The KTWU (Facility ID No. 70938) post transition parameters as designated in the proposed DTV Table of Allotments are as follows:

Proposed DTV Table of Allotment Data

<u>DTV CH.</u>	<u>ERP kW</u>	<u>HAAT meters</u>	<u>Antenna ID</u>	<u>Coordinates NAD 27</u>	<u>Area Sq. km</u>	<u>Population Thousand</u>	<u>Percent Interference Received</u>
11	26	281	74458	39°3'50"N 95°45'49"W	22,483	1,047	0.2

The requested post-transition DTV parameters as requested in this statement are based on the top-mounted radiation center above ground of the existing antenna of 604 meters (302 meters height above average terrain) and an equivalent non-directional ERP of 21.5 kW. See Exhibit E-1 for a comparison of requested facilities and that proposed in the SFNPRM.

¹“In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service,” pertaining to MB Docket No. 87-268, released October 20, 2006.

The requested DTV parameters and associated data for post-transition utilization of the existing top-mounted antenna based on replication of the non-directional KTWU analog facilities are as follows:

Requested Data Corrections

<u>DTV CH.</u>	<u>ERP kW</u>	<u>HAAT meters</u>	<u>Antenna ID</u>	<u>Coordinates NAD 27</u>	<u>Area Sq. km</u>	<u>Population Thousand</u>	<u>Percent Interference Received</u>
11	21.5	302	44049	39°3'50"N 95°45'49"W	28,947	1,220	0.1

To further support that the requested KTWU-DT post-transition facilities will have no impact, an interference study has been performed which takes into consideration and includes the proposed KTWU-DT top-mounted non-directional facilities and all station certifications as designated in the SFNPR. Based on this Longley-Rice study, the KTWU-DT non-directional top-mounted post-transition operation does not receive and causes no unacceptable new interference beyond that currently received and caused by the certified KTWU-DT facilities with the exception of channel 11, KGIN-DT, Grande Island, Nebraska. The proposed top-mounted non-directional facilities of KTWU-DT create approximately 0.1% new interference to KGIN-DT². Attached hereto, is an interference agreement between KTWU-DT and KGIN-DT acknowledging and accepting possible new interference between these two stations. The technical information for the KTWU-DT study is shown in Table I.

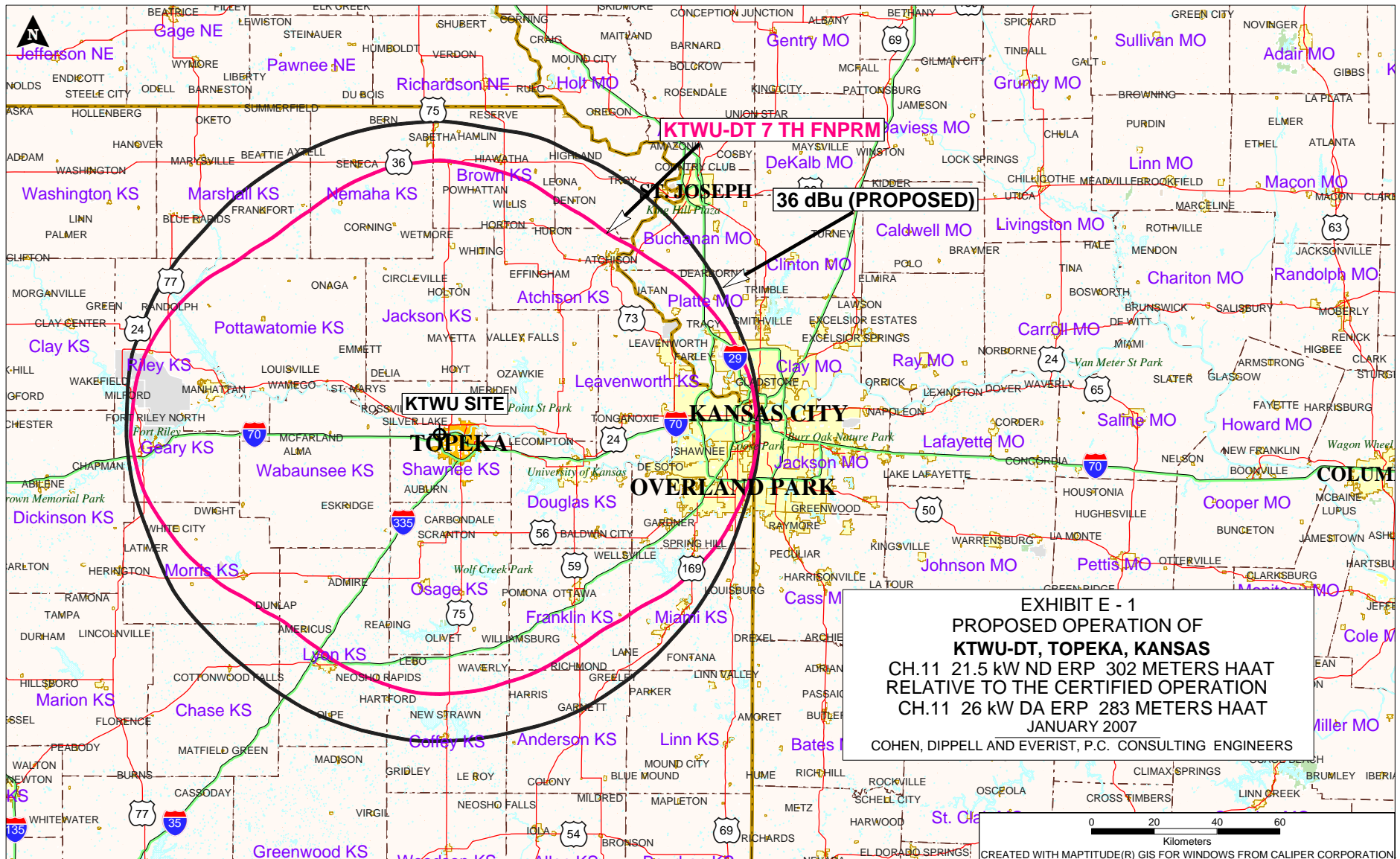
² If KTWU-DT remained at its designated side-mounted height of 580 meters RCAMSL (281 meters HAAT) and operated at 26kW non-directional ERP, the KTWU-DT post-transition facilities would create approximately 0.2% total interference to the certified post-transition operation of channel 11, KGIN-DT, Grande Island, Nebraska.

The Longley-Rice study of predicted interference caused by the proposed top-mounted KTWU-DT post-transition facilities requested herein has been performed using a version of the Longley-Rice program as described in OET Bulletin No. 69 (February 6, 2004) and the Public Notice, "Additional Application Processing Guidelines for Digital Television (DTV)" (August 1998). The FCC's FORTRAN-77 code was modified only to the extent necessary (primarily input/output handling) for the program to run on a Windows98/Intel platform. Comparison of service/interference areas and populations indicates that this model closely matches the FCC's evaluation program. Best efforts have been made to use data and calculations identical to the FCC's program. Any slight differences are attributable to compiler, operating system and/or processor characteristics. The effect of any variance in calculated population values versus the FCC's program is minimized when differencing a given model's results, such as calculating new interference as total interference less baseline interference. Any variance effect is further reduced when using ratios of calculated population values such as measuring the incremental population affected as a percent of the total population served. The model employs the Longley-Rice propagation methodology and evaluates in grid cells of approximately 4 km² terrain data sampled approximately every 1.0 km at one degree azimuth intervals with 2000 census centroids based on the information contained in the FCC engineering database released January 23, 2007 representing all post-transition DTV operations in Appendix B of the SFNPRM.

COHEN, DIPPELL AND EVERIST, P.C.

TABLE I
LONGLEY-RICE ANALYSIS
FOR THE POST-TRANSITION OPERATION OF
KTWU-DT, TOPEKA, KANSAS
CH 11 21.5 KW ND ERP 302 METERS HAAT
JANUARY 2007

<u>Station</u>	<u>City</u>	<u>State</u>	<u>Channel</u>	<u>Distance</u> km	<u>Status</u>	<u>FCC File No.</u>	<u>Interference</u>
KAKE	Wichita	KS	10	209.0	CP Mod	BMPCDT-20041103AKA	No New Interference
KOLN	Lincoln	NE	10	227.8	CP	BDTV-7890BDTV	No New Interference
KDIN	Des Moines	IA	11	355.2	CP	BDTV-29102BDTV	No New Interference
KGIN	Grande Island	NE	11	309.9	CP	BDTV-7894BDTV	0.10%
KOED	Tulsa	OK	11	338.3	CP Mod	BMPEDT-20021015ABX	No New Interference
KWCH	Hutchinson	KS	12	206.5	CP	BDTV-66413BDTV	No New Interference



DIGITAL TELEVISION MUTUAL INTERFERENCE ACCEPTANCE AGREEMENT

This Agreement is made as of January 24, 2007 between Washburn University of Topeka, a Municipal University under the laws of the State of Kansas ("Washburn"), and Gray Television Licensee, Inc., a Georgia corporation ("Gray").

Whereas, Washburn is the licensee of noncommercial educational television Station KTWU, Topeka, Kansas;

Whereas, Gray is the licensee of commercial television Station KGIN, Grande Island, Nebraska;

Whereas, the Federal Communications Commission ("FCC") has in the *Seventh Further Notice of Proposed Rule Making* in MB Docket No. 87-268 (2007) (the "Notice") proposed an allotment for digital facilities for Station KTWU-DT on Channel *11 at effective radiated power of 26 kW with antenna center of radiation at 281 meters above average terrain and a directional side-mounted antenna;

Whereas, Washburn proposes to file comments with the FCC requesting it to modify the allotment for Station KTWU-DT to specify 21.5 kW at 302 meters above average terrain with a nondirectional top-mounted antenna (the "Washburn Comments");

Whereas, the FCC has in the Notice proposed an allotment for digital facilities for Station KGIN-DT on Channel 11, and the modification of the allotment for Station KTWU to be proposed in the Washburn Comments would result in predicted new interference to the signal of Station KGIN-DT of 0.1%;

Whereas, Washburn intends at some future time to apply to the FCC for authority to increase the effective radiated power of Station KTWU-DT above 21.5 kW but to no more than 26 kW (the "Washburn application"), and transmission at 26 kW would result in predicted new interference to the signal of Station KGIN-DT, based on the original proposed allotments, of 0.21% and predicted new interference to the signal of Station KTWU-DT, based on the original proposed allotments, of 0.23%;

Whereas, the parties have determined that the areas of predicted interference set forth above are virtually uninhabited and that the facilities that Washburn intends to propose in the Washburn Comments and in the Washburn Application would not result in any real-world interference problems,

Now, therefore, in consideration of the foregoing and in view of the independent determination by each party that this Agreement will advance its interests, which the parties consider to be good and valuable consideration, Gray will not oppose the proposed Washburn Comments or the proposed Washburn application, and

Washburn will not oppose the DTV allotment proposed in the Notice by the FCC for Station KGIN-DT.

This Agreement may be executed in counterparts, each of which will be deemed to be an original but both of which together will constitute one and the same instrument. This Agreement may be executed and exchanged by facsimile transmission, with the same legal effect as if the signatures had appeared in original handwriting on the same physical document. Neither party shall raise the fact that any signature was transmitted through the use of a facsimile machine as a defense to the formation of a contract and each party forever waives any such defense. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors in interest.

WASHBURN UNIVERSITY OF TOPEKA GRAY TELEVISION LICENSEE, INC.

By:  By: _____

Printed name: Eugene Williams Printed name: _____

Title: CEO / General Manager Title: _____

Washburn will not oppose the DTV allotment proposed in the Notice by the FCC for Station KGIN-DT.

This Agreement may be executed in counterparts, each of which will be deemed to be an original but both of which together will constitute one and the same instrument. This Agreement may be executed and exchanged by facsimile transmission, with the same legal effect as if the signatures had appeared in original handwriting on the same physical document. Neither party shall raise the fact that any signature was transmitted through the use of a facsimile machine as a defense to the formation of a contract and each party forever waives any such defense. This Agreement shall be binding upon and shall inure to the benefit of the parties hereto and their respective successors in interest.

WASHBURN UNIVERSITY OF TOPEKA GRAY TELEVISION LICENSEE, INC.

By: _____ By: Robert A. Beizer 

Printed name: _____ Printed name: Robert A. Beizer

Title: _____ Title: Secretary